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(71) Applicant and
(72) Inventor: HWANG, In Kwan [KR/KR]; #107-1304, Cheonggu Narae Apt., Jeonmin-dong, Yuseong-gu, 305-729 Daejon (KR).

(74) Agent: SHINSUNG PATENT FIRM; Haecheon Bldg., 741-40, Yeoksam 1-dong, Kangnam-gu, Seoul 135-924 (KR).

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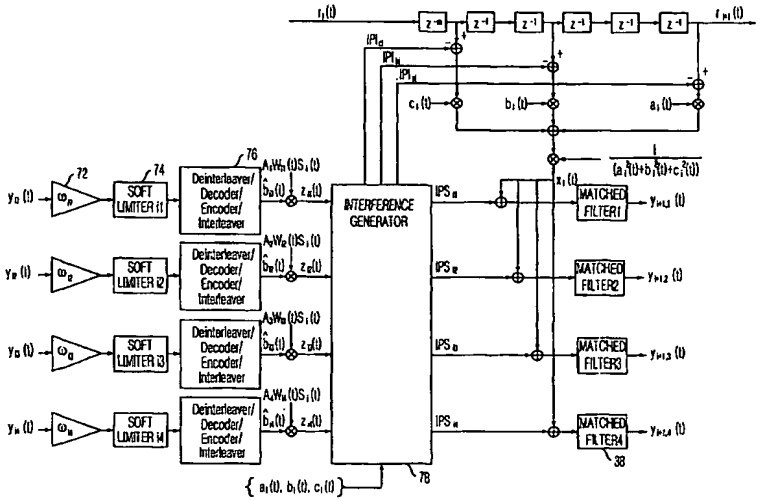
(54) Title: MULTISTAGE ADAPTIVE PARALLEL INTERFERENCE CANCELLER



(57) Abstract: A multistage adaptive parallel interference canceller is disclosed. The multistage adaptive parallel interference canceller for a downlink receiver includes: a plurality of stages of interference cancellation units. Each of interference cancellation units includes: a matched filter for matching a signal from a rake receiver each channel signal and generating a matched signal; a soft decision unit of which a slope is monotonically increased, for performing soft decision of the matched signal and generating a soft-decided signal; a weight controller for controlling the slope of the soft decision unit; a respreader for respreading the soft-decided signal based on a walsh code and a scrambling code and generating a respread signal; an interference calculator for calculating interference signals due to another user signal and multipath signals; and an interference canceller for canceling the interference signals from an input signal received in the rake receiver.

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